OptoPath

TEST THERAPADD 2C

Evaluation of new compounds for the treatment of cocaine addiction in rodents

Background

Escalation of drug use, a hallmark of the transition to addiction, can be induced in most drug self-administering rats by giving them a daily extended access to the drug. Escalation of drug self-administration can be operationally defined by a progressive increase in drug intake over time. Escalated levels of cocaine intake are associated with other addiction-like changes, including an increased motivation for cocaine and an increased vulnerability to stress- and cocaine-induced craving and/or relapse.

Assay principle

The method consists in two main phases: i) a pre-escalation phase during which rats have a short access (i.e., 1h) to cocaine for intravenous self-administration through an indwelling catheter, followed by ii) an escalation phase during which rats have a long access (i.e., 4-6h) to the drug. **A promising compound for the treatment of cocaine addiction should reverse/reduce the main behavioral changes observed after escalation of drug intake.**

Assay Information

Biological models	**Male rats**
Methods	**Intravenous drug self-administration**
Readouts	**Ability to reverse or reduce :** • **escalated levels of cocaine intake** • **increased motivation for cocaine** • **increased vulnerability to relapse**
Standard reference	**None currently available**
Turn around time	**8-10 weeks per test**

Persons in charge

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